National Institute of Environmental Health Sciences

# Level of dependency: a Simple marker associated with mortality during the 2003 heatwave among French dependent elderly people living in the community or in institutions

**Author(s):** Belmin J, Auffray JC, Berbezier C, Boirin P, Mercier S, de Reviers B, Golmard JL
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**Abstract:**

BACKGROUND: In France, the August 2003 heat wave was responsible for considerable excess mortality among the elderly. We wonder whether the dependency level could be a marker of the risk for mortality during this heat wave. METHODS: Retrospective cohort study of deaths that occurred between 1 and 20 August 2003, conducted in five departments in the Paris area (Ile-de-France) among the beneficiaries of the Allocation personnalisee d'autonomie (APA), a stipend specifically allocated to dependent subjects > or Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)60 years of age. Their dependency level was determined by the GIR group (defined by the French law) used to fix the APA amount. Subjects' GIR group classification and demographic variables were obtained from departmental administrative files. RESULTS: Among the 31,603 APA beneficiaries alive on 31 July 2003, 16,779 were community dwellers and 14,824 lived in institutions. Between 1 and 20 August 2003, 858 subjects died: 300 community dwellers and 558 institutionalised (mortality rates of 2.7, 1.8 and 3.8 per cent, respectively). Independent risk factors for mortality were: age, sex and GIR group in community dwellers; age, GIR group and living in a region highly exposed to heatwave mortality for institutionalised elderly; independent factors for mortality were age, sex, GIR group, type of residence (institution/community), living in a region highly exposed to heatwave mortality and income for the overall population. CONCLUSION: The dependency level was associated with mortality during the 2003 heatwave in France, especially for elderly community dwellers. Dependency might help identify high-risk subjects and guide targeted prevention measures against heatwave-associated mortality.

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## Resource Description

**Exposure :**

weather or climate related pathway by which climate change affects health

Temperature

**Temperature:** Extreme Heat

**Geographic Feature:**

resource focuses on specific type of geography

None or Unspecified

**Geographic Location:** ☑

resource focuses on specific location

Non-United States

**Non-United States:** Europe

**European Region/Country:** European Country

**Other European Country :** France

**Health Impact:** ☑

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

**Mitigation/Adaptation:** ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

**Population of Concern:** A focus of content

**Population of Concern:** ☑

populations at particular risk or vulnerability to climate change impacts

Elderly

**Other Vulnerable Population:** women; dependency - need for assistance with activities of daily living

**Resource Type:** ☑

format or standard characteristic of resource

Research Article

**Resilience:** ☑

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

**Timescale:** ☑

time period studied

Time Scale Unspecified

**Vulnerability/Impact Assessment:** ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content